

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) High-repetition mode-coupled ultra-short pulse laser system for generating ~~femto~~ or picosecond pulses, according to the principle of ~~pulse decoupling cavity dumping, comprising at least~~ comprising:

- an amplifying laser ~~medium~~medium;
- a laser resonator with at least one resonator mirror and at least one ~~pulse decoupling component, cavity dumping component~~;
- a saturable absorber ~~mirror and~~mirror; and
- a pump source for pumping the laser ~~medium,~~medium;

wherein the ~~pulse decoupling cavity dumping~~ component is an electro-optical modulator and the laser system generates femtosecond or picosecond pulses with a repetition rate of greater than 10 kHz.

2. (Currently Amended) The ultra-shortUltra-short pulse laser system according to Claim 1, wherein the electro-optical modulator is a BBO cell.

3. (Currently Amended) The ultra-shortUltra-short pulse laser system according to Claim 1, wherein the electro-optical modulator is an RTP cell.

4. (Currently Amended) The ultra-shortUltra-short pulse laser system according to Claim 1, further comprising at least one dispersive mirror for dispersion compensation.

5. (Currently Amended) The ultra-shortUltra-short pulse laser system according to Claim 4, wherein the laser system is formed so that, in the generation of picosecond pulses, the nonlinear phase is less than 100 mrad, the nonlinear phase being calculated per resonator cycle and per 1% modulation depth of the saturable absorber mirror.

6. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1, wherein the laser system is formed so that, in the generation of femtosecond pulses, the r parameter is less than 1.

7. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1 wherein the laser medium is ytterbium-doped glass or Nd:YVO₄.

8. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1, wherein the laser medium comprises ytterbium-doped tungstates.

9. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1, wherein the laser medium has a disc-like geometry.

10. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1, wherein the pump source is formed and is arranged in such a way that a pump light spot having a ratio of length to width of at least 2:1 is formed, the pump light spot consisting of a single ray or the combination of a plurality of rays.

11. (Canceled)

12. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 1, wherein the pump source is a laser diode source.

13. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 3, wherein the RTP cell comprises a component for compensating a thermal drift.

14. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 4, wherein the at least one dispersive mirror for dispersion compensation is a Gires-Tournois interferometer.

15. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 5, wherein the nonlinear phase is less than 10 mrad.

16. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 6, wherein the r parameter is less than 0.25.
17. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 8, wherein the laser medium comprises Yb:KGW or Yb:KYW.
18. (Currently Amended) The ultra-short~~An Ultra-short~~ pulse laser system according to Claim 10, wherein the pump light spot consists of the combination of a plurality of rays, the rays being generated by laser diodes.
19. (Previously Presented) A method of processing a material, comprising:
 - providing a material to be processed by plasma generation, and
 - processing the material using the high-repetition mode-coupled ultra-short pulse laser system according to Claim 1.
20. (New) The ultra-short pulse laser system according to Claim 1, wherein the repetition rate is greater than 100 kHz.